

Lecture Schedule – Spring 2020

ECE 344L: Microprocessors

Date	Day	Topic	Reading / Coverage
Jan 21	Tues	Introduction – Technology Levels	
Jan 23	Thurs	Computer Architecture & Organization	
Jan 28	Tues	Microprocessors & MIPS Architecture	§1, §2
Jan 30	Thurs	Lab 0 Demo, Numerical Representation, Instruction Format	§3
Feb 4	Tues	MIPS Instruction Set & Programming	§2
Feb 6	Thurs	Algorithm Development with Assembly Language	§4
Feb 11	Tues	MIPS Simulators, PIC Architecture & Memory Model	PIC Data Sheet
Feb 13	Thurs	Stack Operations & Nested Procedures	§6
Feb 18	Tues	MIPS Pipeline details	§10
Feb 20	Thurs	PIC Design Details and Peripherals	PIC Data Sheet
Feb 25	Tues	Digilent MX7 Board Detailed Overview & Clock Configuration	Cerebot RM, PIC RM Sect. 6
Feb 27	Thurs	Digital I/O with Ports	PIC RM Sect. 12
Mar 3	Tues	Timers	PIC RM Sect. 14
Mar 5	Thurs	Review	
Mar 10	Tues	Test 1	
Mar 12	Thurs	Interrupts	PIC RM Sect. 8
Mar 17, 19		Spring Break – No Class	
Mar 24	Tues	ISR Formats, 32-bit Timers	C Compiler User Guide, PIC RM Sect. 8 & 14
Mar 26	Thurs	Communication Interfaces	PIC Data Sheet
Mar 31	Tues	Serial Communications with a UART	PIC RM Sect. 14
Apr 2	Thurs	Data Encoding, Using UARTS Interrupts	Handout, PIC RM Sect. 14
Apr 7	Tues	Serial Peripheral Interface & LCD Display	PIC RM Sect. 23
Apr 9	Thurs	I2C and Temperature Sensor	PIC RM Sect. 24
Apr 14	Tues	Fundamentals of Analog to Digital Conversion	(23)
Apr 16	Thurs	Review	
Apr 21	Tues	Test 2	
Apr 23	Thurs	PIC ADC Interface	PIC RM Sect. 17
Apr 28	Tues	ACD Configuration & Pulse Width Modulation	PIC RM Sect. 17
Apr 30	Thurs	Output Compare & Generating PWM signals	PIC RM Sect. 16, 14
May 5	Tues	Controlling stepper motors	Handout
May 7	Thurs	Summary	
May 14	Thurs	FINAL EXAM 10:00 am – 12:00 pm	